1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34

Sierra Tarascans
La Cañada

443 Sunday. The places where meat is sold are
253 called "*despachos*" and are announced by hang-
262 ing out a red flag on a standard. Four or five places sell meat remaining from Sunday through most of the week. No distinction is made in price between meat with bone and meat without bone, but on request one will be served only meat; in the Tarascan towns the buyer has to take what is cut. Pork is preferred to beef. Beef hides are sold to dealers; those of swine either are made into cracklings or are pickled in vinegar after rubbing with chile, onion, garlic, and fragrant herbs.

226 Some fish are caught with nets in the river
262 passing Chilchota. The fishermen are only semiprofessional, fishing when they have time and selling the catch only if they have more than can be consumed at home. At least one
224 man, a farmer, hunts deer in his spare time.
262 He sells the flesh retail like beef. The dried
239 deer blood, hoofs, and hair are sold for magical or medicinal uses.

Black maize is used primarily to make
252 *chapatas*, tamales of black or red maize, sweet-
262 ened with brown sugar and mixed with black or red amaranth. It is also used to make *atole de cascara de cacao* (atole of chocolate hulls) and *ponteduros*, which are toasted immature corn ground and mixed with brown sugar sirup.

Greens (*quelites*) of wheat are made from
423 a wild plant or weed which grows among the
252 wheat and are greatly liked in Chilchota. A
262 curious custom exists in that anyone may help himself to these greens, entering into wheat fields belonging to others either with or without permission. Anyone objecting would be severely censored in Chilchota. Pozole is also made from green wheat toasted, ground, and mixed with chile, salt, and "*epazote*." The time for this is May at the harvest; it is "hot" food.

252 A food made from the chayote root is *sagú*.
262 The skin is removed from the tubers and the pulp ground to a sort of flour. The flour is placed in water for 2 or 3 days, being stirred frequently. The flour is then allowed to settle, the water drained off, and the flour dried. Although it is used in various dishes, the main
[846] use is to feed small children and women recently delivered, when it is cooked in water, either plain or sweetened with honey. The plain boiled chayote root, uarás in Tarascan, is sold

423 hectares in size,[48] and may be used indefinitely by the recipient, provided they are not left untilled for more than two successive years. They may [428] be inherited by sons, daughters, or in-laws, and may be divided among them. A family head may sell the use rights of his land to another member of the community, but not to outsiders. The official title to lands is held by the pueblo.

Another remnant of communal holdings, common in all parts of Tarasca, is found in the woodland, which is considered common land.[49]

[804] [Text Continues Top of P. 33b]

[48] In most parts of Tarasca land is measured in terms of the quantity of grain used in planting. Thus, in La Cañada a plot of maize land may vary from 1 to 8 liters of maize in size. Approximately 2 liters of maize is necessary to plant 1 hectare. (The term "hectare," however, is unknown to most Tarascans.) Five liters of maize equal 1 *medida;* 100 liters of maize are equivalent to 1 *fanega* (one hundredweight), or one *yunta*, meaning the amount of land in which a team (*yunta*) of oxen can plant one *fanega* of maize in one season. In terms of wheat, 44 liters equal 1 *carga*, or from 1 to 1½ *yuntas*. The above equivalents are those used in Chilchota and Carapan. Similar land measurements are employed in the Sierra.

[49] This aboriginal custom parallels the ancient Spanish practice of reserving woodland as communal property.

TARASCAN ECONOMY

241 Tarascan economy is today, and was in pre-Conquest times, as diversified as that of any large Indian group in North America. Agriculture has always been the preeminent occupation of most of the Tarascan population. Formerly, a 226 significant part of the people were fishers (or farmers and fishers), living around the shores of Lakes Pátzcuaro and Zirahuén and the numerous lakes and marshes of the northern plateau; the modern fishers are limited chiefly to the islands 224 within Lake Pátzcuaro. Moreover, hunting and 222 gathering, although now of small importance, is still practiced throughout the area. Apart from 463 the food quest, two other occupations have characterized Tarascan economy since prehistoric days: handicrafts and trade. Many of the Tarascan [438] villages specialize in particular home industries, for which they are famed over a large area. Again, in prehistoric and modern times the Tarascan has been one of the more notable Indian traders, serving as commercial middleman between the *tierra fría* and *tierra caliente* to the south and west.

AGRICULTURAL SYSTEMS AND ASSOCIATED CROP TYPES

241 Tarascan agriculture involves a mixture of New and Old World plants and cultivation practices. 177 The native trilogy—maize, beans, and squash—

[Text Continues bottom P. 33b]

4: West K-5 (1946) 1948 NU34 Tarasco NU34
[P. 525b] Pátzcuaro

224 (1946, p. 19) mentions the use of pit traps and snares in Cherán.

FISHING

226 A large part of pre-Conquest Tarasca was inhabited by fishers, most of whom were part-time farmers.[118] There were two important fishing areas: (1) the northern plateau region, dotted with lakes and marshes, and (2) the central lakes, Pátzcuaro and Zirahuén. Fishing was also practiced in the shallow lagoons in the Cotija graben west of the Sierra and in the Tepalcatepec and Balsas Rivers in the *tierra caliente*. In the above-named areas fishing continued unchanged throughout most of the colonial period, but during the last 150 years it has declined mainly in the northern and western sections, owing to desiccation and draining of marshes.[119] In Lake Pátzcuaro, fishing has been declining since the mid-18th century. By 1789 all the inhabitants of the south-shore pueblos had ceased to fish (AGN Historia, vol. 73, ff. 292–302v), and today Lake Pátzcuaro fishers are limited mainly to the islands and a few small *ranchos* on the Tarıu-k'éri Peninsula. Only ves-

[118] The Nahuatl name for the Tarascan area (particularly the section around the central lakes) was Mechmeccán, meaning the land of the fishers.

[119] The desiccated areas where fishing was once significant included the basins of Zacapu, the Tarimbaro lowland north of Morelia, the Tangancícuaro Basin, the lowlands southeast of Lake Chapala, and the chain of lakes (Guadalupe, San Juanico, Magdalena, Tacámbaro) in the Cotija graben. Some fishing is still practiced by mestizos in Lakes Yuriria and Cuitzeo, although the waters of both are constantly receding, and the latter occasionally dries up completely. The western portion of Lake Chapala, formerly Tarascan territory, is still fished. There are some nine mestizo fishermen at Zirahuén, and *carpa* are still caught in the *tierra caliente* streams. This fish is dried and carried to the Sierra towns for consumption on fast days.

4: West K-5 (1946) 1948 NU34 Tarasco NU34
[P. 52-C] Pátzcuaro

226 tiges remain in some of the mainland towns, where a few farmers fish part-time along the shore to supply local demand (map 19).

136 **The fish resource.**—The native fishes of Lake Pátzcuaro are common to most lakes and streams of the western part of the Mesa Central. Most of the commercially important species belong to the genus *Chirostoma* (Atherinidae), which vary in length from 2 to 12 inches. *C. estor* is the famed *pescado blanco* (kurúča urápiti) of Pátzcuaro; *C. bartoni*, the *charal* or č'arári, is a tiny species that is sun-dried and sold over a wide area; *C. grandocule* is called k'uerépu, although this term is usually applied to the young of other species. Other genera include small fish, notably akúmaia, or *sardina* (*Algansea lacustris*), čéua (*Allophorus robustus*), and t'íru, which includes at least four genera of the Goodeidae family (*Goodea luitpoldii*, *Neoophorus diazi diazi*, *Allotoca vivipara*, *Skiffia lermae*). Around 1930 a black bass (*Micropterus* (*Huro*) *salmoides*), called *trucha* or *carpa*, native to eastern North American streams, was introduced into Lake Pátzcuaro presumably to increase a failing fish reserve. The *trucha*, however, upset an established biotic equilibrium by feeding on the small littoral fish, almost exterminating the t'íru and diminishing the stock of čéua and č'arári. In addition to fish, freshwater shrimp (šapitu) and frogs (kuanása, *Rana pipens*) inhabit the lake and are often caught and eaten.[120]

[TEXT CONTINUES TOP OF P. 549]

[120] A large literature exists on the fish resources of Lake Pátzcuaro. The more important works are Ancona et al. (1949), Osorio Tafall (1944), and De Buen (1943, 1944).

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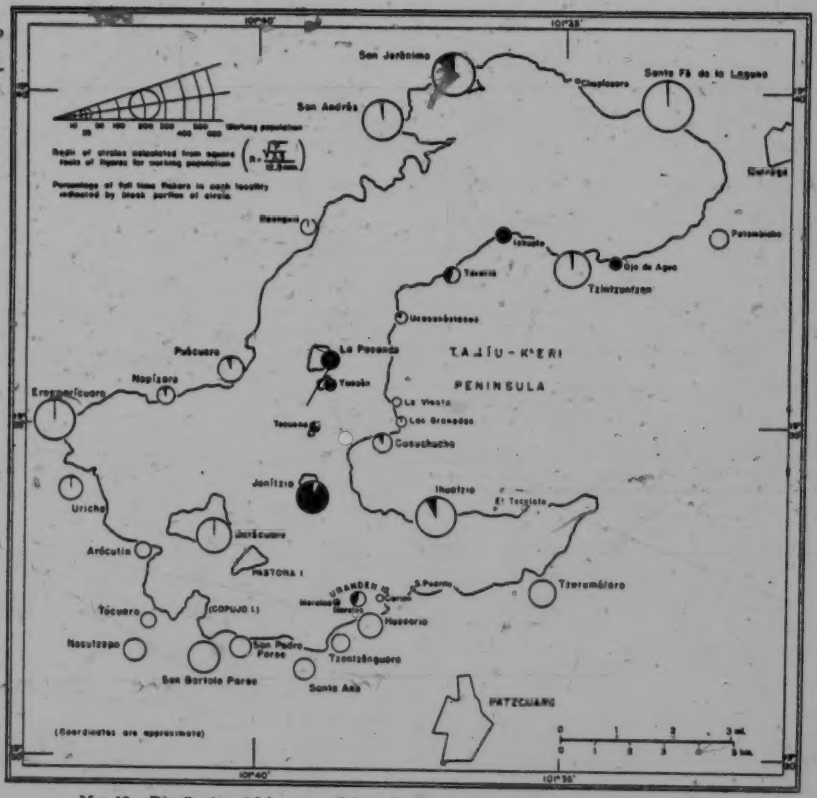

MAP 19.—Distribution of fishers around Lake Pátzcuaro, 1940. Data from official census, 1940.

227 **Fishing techniques and associated tools.**—Fishing with native Tarascan nets predominates in Lakes Pátzcuaro and Zirahuén. Both the net and the hook were employed in pre-Conquest times,[121] but at present the latter is of secondary importance. The large *chinchorros* (uarúka) and the smaller čerémekuas are the only nets used today. The former is a seine, employed for catching *pescado blanco* and *trucha* in midlake, while the latter, a gill net with a fine mesh, is placed along shore to trap the small č'arári and k'uerépu[122] (pl. 8). Prior to the introduction of the *trucha* the picturesque *mariposa* or butterfly nets (k'oruečа) were commonly employed for catching t'íru. Owing to the near extinction of this fish, these nets are no longer seen, except in Janitzio, where they are displayed to tourists. The hand net (*cuchara*, uirípu, čiúru) has likewise practically disappeared. All nets used by the Pátzcuaro fisherman are home-woven.

Other fishing tools include the spear (*arpón*, atárakua), now used to kill *trucha* in shallow water, and the hook (*anzuelo*, jupíkata-tárakua).[123] Shore traps are occasionally used by a few fishers of Uricho and Puácuaro. Fish poisons are not employed. To improve habitat conditions of open-water fish, such as *pescado blanco*, portions of the lake bottom are often cleared of aquatic grasses (*zacate*, pučúrini) with the uarómatárakua, a pole 3 m. long with a sickle attached to the end.

501 An indispensible fishing tool and means of water transport is the Tarascan canoe, a flat-bottom dugout hewn from a pine or fir log. Owing to the

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226 [121] According to the Relación de Michoacán, Tarascan officials oversaw the net fishermen and those who fished with hooks (p. 16). Moreover, ". . . *de noche pescan con red y de día con anzuelo*" (p. 149).

[122] The *chinchorro* often measures 100 to 150 m. long and 8 m. wide. In the center is a pocket (*bolsa*) of fine mesh. Four people are necessary to handle the net in midlake, and it is usually operated from one boat. The net is manipulated by ropes (*tenates*), 50 to 60 m. long attached to its two ends. Once the net is cast, it is formed in a semicircle and slowly pulled forward and upward, while the catch settles into the bolsa. The čerémekua is usually 6 to 8 m. long and 40 cm. wide. This net is used somewhat like a trap. It is fastened to poles in shallow water near the shore and left for 2 or 3 hours. When lifted, the net usually contains several small littoral fish, their heads caught in the fine mesh. One type of čerémekua can be operated by one person. A longer čerémekua (from 100 m. in length) with a coarser mesh is sometimes used to catch pescado blanco in deep water offshore. Like the smaller variety, it is operated by one person, who attaches the top of the net to log floats and one end to his canoe. The net and boat are permitted to drift in midlake usually through the night, while the attendant gathers in the trapped fish from time to time.

[123] The atárakua is composed of a stalk of *carrizo* 4 m. long, to the end of which is attached a long barbed iron point (20 cm. long). The spear is buried either above or beneath the water. Regarding the use of the anzuelo, the cord supporting the hook is usually attached to a piece of *carrizo* or *otate*, 1 m. long, a series of which is permitted to float on the water. A strike is indicated by the tilting of the stick, which is hurriedly picked up by the boatman.

501 drying up of lakes in the northern and western sections of Tarasca, the distribution of the dugout has decreased in area during the last 100 years. At the present time the Tarascan boat is used on Lakes Pátzcuaro, Zirahuén, Cuitzeo, and Chapala; two old dugouts on the small pond at Tarejero represent the remnants of the once extensive canoe traffic in the Zacapu lagoon.[124] Most of the Lake [438] Pátzcuaro boats are made in the Sierra settlements of Cumachuén, Capacuaro, and in the highlands to the south, mainly around the *rancho* of Santa Juana. The boats are dragged to the lake shore, where they sell for 100 to more than 600 pesos each. They are said to last for 3 to 5 years before becoming waterlogged. Two sizes of boats are seen on Lake Pátzcuaro—the small ičárata for two to four persons, used for shore fishing, and the larger tepári, which carries from four to eight individuals and is employed in midlake fishing and for transport.[125] The smaller boat is paddled with the *pala* or šótakua, which has a round blade of pine (25 × 28 cm.) attached to a handle of oak or *tejocote* varying in length from 30 cm. (for children) to over 2 m. The larger canoes are both paddled and rowed. Sierra folk from Cumachuén and Capacuaro manufacture oars and paddles, which they market in Erongarícuaro and Pátzcuaro.

226 **Fishing methods.**—In most parts of the lake, fishing is done in the early morning hours between 5 and 10 o'clock. Fishing is seasonal, most activity occurring during the dry season (November to May). *Chinchorreros* usually operate in groups of four; often blood relations, the group divides the catch equally. An owner of a net and boat often hires *peones* to help with the *chinchorro*, paying wages or dividing the catch. The wife and children occasionally help set the čerémekua along the shore, and often women aid with the *chinchorro*. Midlake fishing is open to all inhabitants of the Lake area, who pay a federal license of 1.50 pesos annually. By custom, however, the people of a particular settlement have exclusive fishing rights along the shore of their lands; those from other pueblos may not fish the shores of

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[124] As late as 1872 heavy canoe traffic is described between Tarejero and Zacapu (Pérez Hernández, 1872, p. 119). Late in the 16th century small reed balsas were used on Lake Chapala (Ponce Relación, vol. 2, pp. 19–20).

[125] Measurements of the dugouts: The Pátzcuaro has a length of 2.5 m. to 6.5 m., width of 60 cm., and depth of 40 cm.; the tepári ranges from 6.5 to 11 m. long, 1 m. wide, and 80 cm. deep.

4: West K-5 (1946) 1948 NU34 Tarasco NU34
[P. 55-d] Pátzcuaro Sierra

226 another without permission from the authorities of the latter.

252 **Fish preparation.**—*Pescado blanco, trucha,* and akúmara are usually taken to market fresh, although the latter is sometimes fried on the *comal* before being sold. The tiny k'uerépu and ð'arári, however, are invariably sun-dried, the catch being spread on a petate, which is placed near the door of the dwelling where it can be easily watched [439] (pl. 11). Since pre-Conquest days dried ð'arári has been one of the main exports of the Tarascan lakes. It was distributed into the *tierra caliente,* the Sierra, and as far east as Toluca.

LUMBERING ACTIVITIES

313 The Tarascans, possibly more than any other aboriginal group of Mexico, have been exploiters of forest products since pre-Columbian times. During the Empire period one of the important officials of the *caltzontzin* at Tzintzuntzan was in charge of "the keepers of the forests," who cut beams and made planks for public, and probably private, use.[136] Not only were large beams and logs used in the construction of temples, but also in the building of forts against Aztec raids. During the colonial period the pine forests on the northern flanks of the Sierra de Ozumatlán were heavily exploited by Tarascan woodmen for beams, planks, and shakes for the Guanajauto and Zacatecas mining districts.[137]

Much of the timber resource of northern Michoacán was depleted by the end of the 18th century. Relatively untouched by colonial exploitation, the pine and fir forests of the Sierra de los Tarascos, although constantly diminishing, have remained the principal source of timber for the indigenous population. There are few contemporary Sierra Tarascan men who cannot handle an ax or lumber saw. When the maize fields do not demand their attention, the family head and his sons are usually in the forest cutting timber or gathering resin. The Sierra Indian is consequently both a farmer and a lumberjack. Some are professional woodsmen, who live in the village but seldom engage in agriculture. Little lumber-

[136] Relacion de Michoacán, p. 17: ". . . diputado sobre los que guardaban los montes que tenían cargo de cortar vigas y hacer tablas y otra madera de los montes . . ."

[137] This exploitation began immediately after the Guanajuato mines were opened ca. 1554, and extended into the post-colonial period. After the exhaustion of the local wood supply, Zacatecas began to draw on the northern Michoacán lumber reserves during the first part of the 17th century (Bancroft, 1886, vol. 1, p. 315).